# MY76H / MY76HC

## **Double-Balanced Mixer**



Rev. V3

#### Features

- LO 2.5 to 11.5 GHz
- RF 4.5 to 9.5 GHz
- IF DC to 2.0 GHz
- LO Drive +20 dBm (nominal)
- High Intercept Point +24 dBm (typ)

### Description

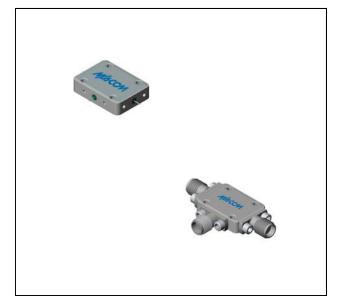
The MY76H is a double balanced mixer, designed for use in military, commercial and test equipment applications. The design utilizes Schottky ring quad diodes and broadband soft dielectric and ferrite baluns to attain excellent performance. This mixer can also be used as a phase detector and/or bi-phase modulator since the IF port is DC coupled to the diodes. The use of high temperature solder and welded assembly processes used internally makes it ideal for use in manual, semi-automated assembly. Environmental screening available to MIL-STD-883, MIL-STD-202, or MIL-DTL-28837, consult factory.

## **Ordering Information**

Part Number	Package
MY76H	Versapac
MY76HC	SMA Connectorized

## Electrical Specifications: $Z_0 = 50\Omega$ Lo =+20 dBm (Downconverter application only)

Parameter	Test Conditions		Typical	Guai	ranteed
Farameter				+25ºC	-54º to +85ºC
SSB Conversion Loss (max)	fR = 4.5 to 8 GHz, fL = 2.5 to 10 GHz, fI = 0.03 to 2 GHz fR = 8 to 9 GHz, fL = 6.5 to 10.5 GHz, fI = 0.03 to 1.5 GHz fR = 8 to 9.5 GHz, fL = 6 to 11.5 GHz, fI = 0.03 to 2 GHz	dB	5.5 6.5 8.0	7.0 8.0 9.5	7.3 8.3 9.8
SSB Noise Figure (max)	Within 1 dB of conversion loss				
Isolation, L to R (min)	fL = 2.5 to 11.5 GHz	dB	35	22	21
Isolation, L to I (min)	fL = 6.5 to 11.5 GHz fL = 2.5 to 6.5 GHz	dB	30 22	20 15	19 14
1 dB Conversion Comp.	fL = +20 dBm	dBm	+15		
Input IP3	fR1 = 6.12 GHz at 0 dBm, fR2 = 6.18 GHz at 0 dBm, fL = 7.2 GHz at +20 dBm	dBm	+24		



Product Image

• India Tel: +91.80.4155721 • China Tel: +86.21.2407.1588

Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

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<sup>1</sup> 

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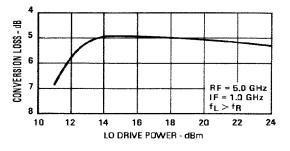
## **Double-Balanced Mixer**



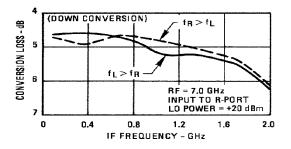
Rev. V3

### **Typical Performance Curves**

#### Conversion Loss vs. LO Drive Power

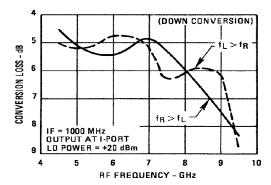


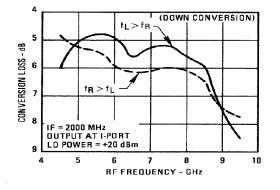
Conversion Loss



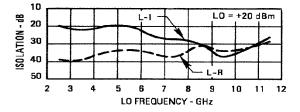
3 (UP CONVERSION CONVERSION LOSS - dB SATELLITE UP-LINK BAND) 4 fL> fR 5 IF = 1000 MHz INPUT TO I-PORT LO POWER = +20 dBm fr > 5.9 6.0 6.4 6.1 6.2 6.3 OUTPUT FREQUENCY - GHz







Isolation



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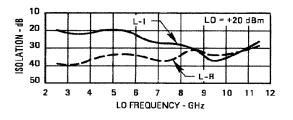
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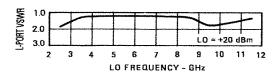
### **Absolute Maximum Ratings**

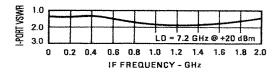
Parameter	Absolute Maximum			
Operating Temperature	-54⁰C to +100⁰C			
Storage Temperature	-65°C to +100°C			
Peak Input Power	+25 dBm max @ +25⁰C +20 dBm max @ +100⁰C			
Peak Input Current	100 mA DC			

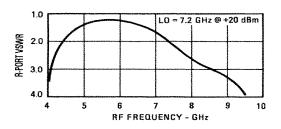
#### Isolation



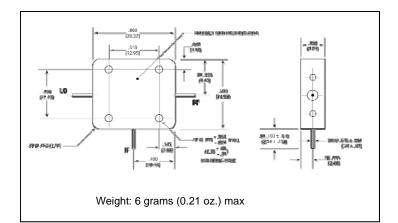
#### VSWR



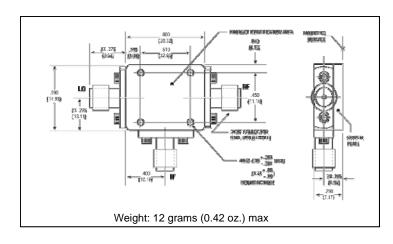




## Outline Drawing: Versapac



## Outline Drawing: SMA Connectorized \*



\* Dimensions are inches (millimeters) ±0.015 (0.38) unless otherwise specified.

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